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Reionization effect enhancement due to primordial black holes

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Abstract

© 2017 World Scientific Publishing CompanyPrimordial black holes (PBHs) could account for variety of phenomena like dark matter, reionization of the universe, early quasars, coalescence of black holes registered through gravitational waves recently. Each phenomenon relates to PBH of a specific mass range. PBH mass spectra varies in a wide range depending on specific model. Earlier, we have shown that PBH with monochromatic mass distribution around (Formula presented.) g value allow to re-ionize the universe moderately. Here, we show that reionization effect and contribution to dark matter can be simultaneously enhanced with more natural extended mass distribution in the range around the same mass value.

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Keywords

dark matter, Primordial black holes, reionization